

6.0 ESTIMATING ASSUMPTIONS

The cost study has been broken into distinct segments, and is based heavily on Redpath's recent experience in the Carbon/Emery County area. The distinct segments consist of:

- 1) Mobilization and demobilization.
- 2) Plant setup and take down.
- 3) Ramps up, to gain 40 feet in elevation at a grade of 15%.
- 4) Level runs of 420, which will cross over the six proposed Genwal entries, plus two 60 foot long crosscuts to connect the crossovers.
- 5) Decline down at -15% to return to the Hiawatha coal seam.

6.1 Assumptions

1. Access to the surface is located approximately 2 miles from the work site.
2. Mined out areas for disposal of the broken rock exist at an average distance of 3500 feet from the work site. (See Figure 1)
3. Mined out areas exist within 500 feet of the underground job site that can be used for contractors facilities.
4. Underground access is available to the contractor, and is at least 10 feet high by 13 feet wide.
5. Surface space and utilities (water, electricity and sewage) are available and provided for the contractors facilities (office, changehouse, shop, etc.).
6. Water and electricity are provided at the job site underground.
7. Adequate ventilation is provided at the underground job site.
8. Blasting can be done at will.
9. A distance of 750 miles has been assumed for mobilization and demobilization. This provides a sufficient radius to include most of the reputable contractors in the western U.S..

6.2 Other

Drilling information and observations in Genwal's existing mine indicate the thickness of the coal seam is 10 feet to the south of the proposed ROW, and that it thins out to 5 to 6 feet (and less) to the north of the ROW. For this reason, the access across the ROW is excavated only to a height of 8 feet. This height is optimum from a cost standpoint and higher than the coal seam to be accessed via this bypass.

Based on Redpath's experience and drill logs of the area, ground support will be provided by 5 foot long epoxy grouted rockbolts and mine mats on 4 foot centers. It is felt this will be all the ground support necessary, and the resulting work will be airtight.

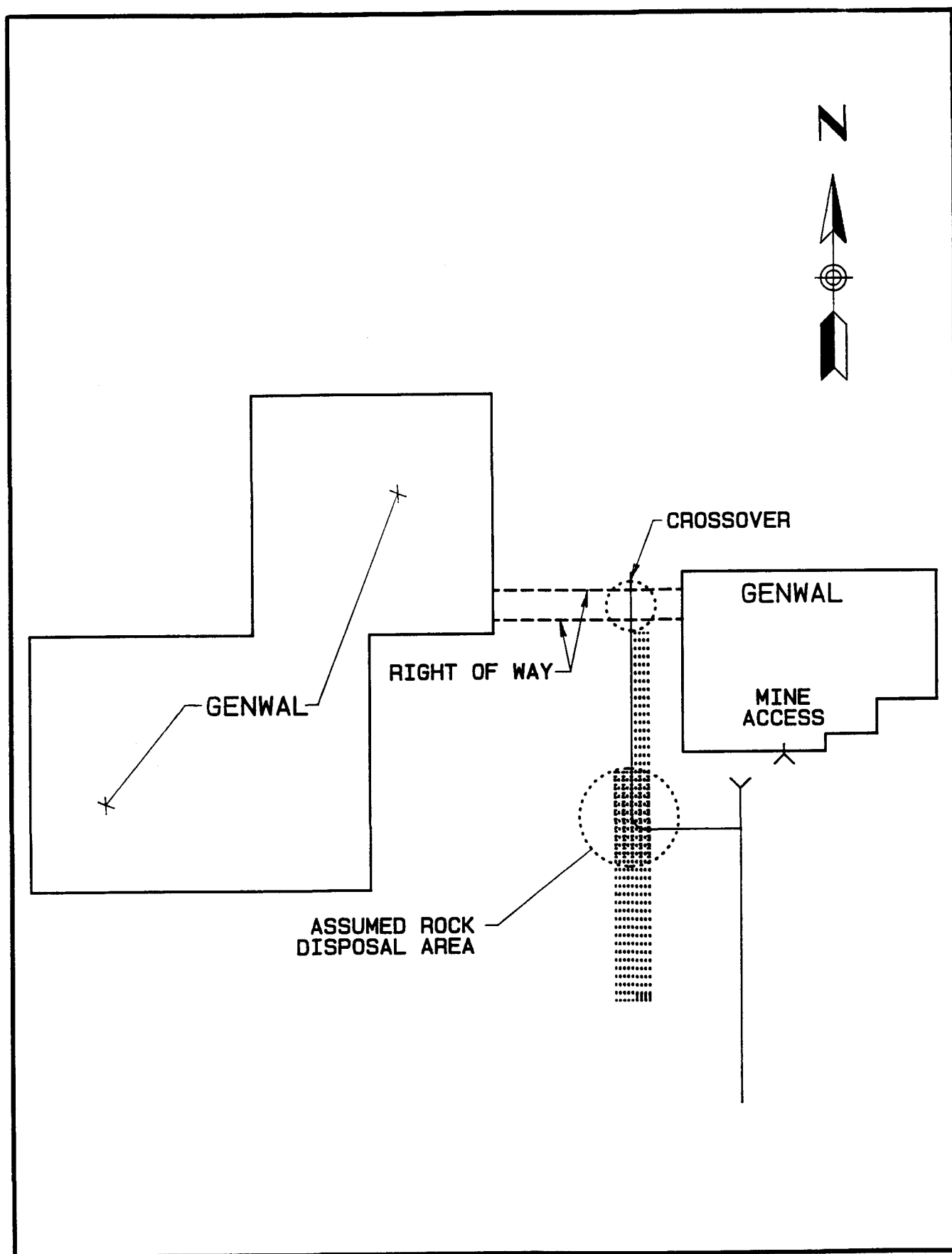


Figure 1
SCHEMATIC OF CROSSOVER PROJECT